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Remarks

Claims 4-12 are pending in this Application. Claims 4, 7 and 10 have been amended. Claims 1-3 and 13-14 have been cancelled. Thus, claims 4-12 are subject to continued examination.

Obviousness Rejections

The rejections based upon Morin and Connor have been withdrawn. The two references remaining are Fujishita and Inoue, as set forth below.

Claims 4-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,560,734 issued to Fujishita et al. in view of JP 2001-081628 to Inoue (hereafter "Inoue"). Continued rejection on this basis is traversed and reconsideration is requested.

Fujishita is relied upon as teaching the limitations presented, but as stated in the Office Action, does not teach the amount of nucleating agent. Inoue is relied upon for teaching a woven backing.

It is conceded in the Office Action that neither Fujishita or Inoue teach the claimed shrinkage rate.

In the Office Action, however, it is still asserted that the combination of Fujishita and Inoue somehow inherently possess the characteristics of the claimed invention.

This obviousness rejection is traversed, for reasons stated below.

**The Inoue Reference Does
Not Disclose or Render Obvious the Invention**

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Inoue teaches the use of polypropylene and polyethylene, as a blend, in a needle punched structure. This polymer blend is said to be useful for woven backings with a nucleating agent, which is not identified.

The claims, as amended above, are not met or obvious in light of Inoue.

Inoue calls for a blend of polymer, using polyethylene and polypropylene.

Contrary to the statements in the Office Action, that "applicant's tape yarns are made from the same composition and from the same process", this is certainly not correct with respect to Inoue.

The claims each have been amended to incorporate the limitation that the backing layer of the tufted carpet "consists essentially of polypropylene." The claim language "consists essentially of" should be accorded its meaning. In general, that means that the phrase "consisting essentially of" limits the scope of the claim to specified materials or steps and those that do not materially affect the basic and novel characteristics of the claimed invention. MPEP, Section 2111.03.

In this instance, the presence of polyethylene in the teachings of Inoue materially affects the basic and novel characteristics of the claimed invention. It is well known that blends of polypropylene/polyethylene do not behave in the same manner as polypropylene without polyethylene. Thus, the "consisting essentially of" language excludes the teachings of Inoue in the claimed invention. The use of both polymers (polyethylene and polypropylene) in Inoue is not in accord with the claimed invention.

Inoue also does not teach the recited shrinkage rate "after exposure to 150°C hot air of less than about 2%", which appears in each and every claim, directly or by

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dependency. Thus, Inoue fails to set forth even a *prima facie* case for obviousness. Inoue does not teach reduced shrinkage at all, and that is not even proposed as a feature of the polymer blend of Inoue. There is no evidence that the polymer blend of Inoue could achieve such low levels of shrinkage, and given the known differences between polymer blends and polypropylene that is unblended, there cannot be a case for inherency.

**Inherency Requires That the Allegedly
Inherent Characteristic *Necessarily* Flows
From the Teachings of the Prior Art**

In addressing the requirements to establish inherency the MPEP states that the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Applicants respectfully submit that such a basis has not been provided at all with respect to Inoue, and its blends of polypropylene and polyethylene, with no stated shrinkage advantage. Since the basic components used in Inoue are different from that taught by the present application, including the use of polyethylene, there is absolutely no reason to suspect that the behavior of Inoue would mimic that of the invention. In fact, there is no suggestion of any shrinkage advantage at all in Inoue, using polyethylene. One of ordinary skill in the art would assume that if Inoue invented a shrinkage advantage, using polyethylene, he would have reported such an advantage. The failure of Inoue to report such an advantage is ample evidence that no such advantage exists.

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Applicants respectfully note that MPEP § 2112 specifically states that the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)."

In addressing the requirements to establish inherency the MPEP states that the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Applicants respectfully submit that such a basis has not been provided.

**The Fujishita Reference Does
Not Disclose or Render Obvious the Invention**

Fujishita fails to teach or disclose heat shrinkability as claimed. Further, Fujishita teaches away from the use of nucleating agents.

Fujishita teaches the use of polypolyene with certain isotactic pentad ratios. This specialized polypropylene is said to improve heat shrinkability and tenacity. Thus, it is one goal of Fujishita to improve heat shrinkability.

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Given that one stated goal of Fujishita is to improve heat shrinkability, it follows that Fujishita would proudly report any and all data he produced that supported or lend credibility to his attempts to improve heat shrinkability. In fact, he does so, and even Fujishita's best shrinkage numbers fall far short of the shrinkage achieved in the practice of the invention, and also fall outside the clear and limited scope of applicant's amended claims.

The claims call for a shrinkage rate after exposure to 150°C hot air of less than about 2%. One can be sure that if Fujishita achieves such a rate, he would proudly report it. However, even the best example reported by Fujishita (3.3% as reported in Table 1, for 150 degrees C) falls at least 60% short of the shrinkage rates of the invention, which are reported at less than about 2%.

It is not known exactly why the specific combination provided by the invention achieves such low shrinkage rates, and it is not required for patentability that applicant disclose or discover all the details of the mechanism that makes this possible. Shrinkage is important. It is inconceivable that Fujishita would have achieved such a result, and then not reported it, given that one of his goals was reduced shrinkage. A plain reading of Fujishita is that it falls outside applicants' claimed ranges with regard to shrinkage.

With regard to the use of nucleating agents, Fujishita simply does not do so. He simply does not use them in his examples, and he specifically warns against using them at temperatures above about 130 degrees C. At column 2, he states, with regard to processes that use nucleating agents: "improvement in the heat shrinkability at high temperatures, higher than 130 degrees C, cannot be observed".

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Thus, the failure of Fujishita specifically and clearly announces his failure to find useful nucleating agents at elevated temperatures, directly opposite the invention.

It is now known, by the practice of the invention, that Fujishita was wrong regarding his resistance to use nucleating agents. In fact, applicants have discovered exactly the opposite of what Fujishita indicated. Applicants have discovered and claimed shrinkability that is superior to Fujishita, using nucleating agents that Fujishita warned against using --- at high temperatures of about 150 degrees C. The "teaching away" by Fujishita with regard to nucleating agents, at elevated temperatures, could not be more clear. If Fujishita was interested in or advocating nucleating agents, then why do all of his examples fail to use them? The answer is simple: he teaches against their use, at elevated temperatures.

The invention specifically claims the use of a nucleating agent in polypropylene, to form tape fibers exhibiting a shrinkage rate after exposure to 150°C hot air of less than about 2%. This result is not taught, or suggested by Fujishita. In fact, Fujishita teaches against using nucleating agents at this temperature.

There Can be No Obviousness in this Instance

To support an obviousness rejection all elements of the claims must be taught or suggested by the cited art. In the present case it is respectfully submitted that there is nothing in the combination of Fujishita and Inoue which suggests a tufted carpet with a backing layer comprising polypropylene tape fibers as claimed, to achieve the shrinkage levels, using a nucleating agent. Certainly there is no

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indication of low shrinkage polypropylene tape fibers incorporating the levels of nucleator compound claimed.

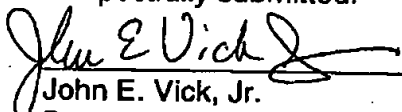
A person of skill in the art (without the hindsight of reading the present application) would not be led to the invention by such a combination. A combination of these two references could lead to the use of a blend of polyethylene and polypropylene, using a particular isotactic pentad ratio, without nucleating agents (since they are stated not to work at elevated temperatures), with between 3.3% and about 15 % shrinkage.

Conclusion:

For the reasons set forth above, it is respectfully submitted that all claims now stand in condition for allowance. To any extent required for acceptance of this paper, an extension of time is hereby requested.

In the event that there are additional fees associated with the submission of these papers (including extension of time fees), authorization is hereby provided to withdraw such fees from Deposit Account No. 04-0500.

Respectfully submitted:


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